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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/964,947	09/26/2001	James Chi-Shun Tsiao	PROQP003	3725
22434	7590	09/22/2004	EXAMINER	SKED, MATTHEW J
			ART UNIT	PAPER NUMBER
			2655	

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/964,947	TSIAO ET AL.
	Examiner Matthew J Sked	Art Unit 2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-29 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 08 January 2002 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____ .  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>5/23/02</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____ .                                  |

## DETAILED ACTION

### ***Specification***

1. The disclosure and claims are objected to because the term "voice recognition" is misused for what nowadays is called --**speech recognition**-- in the speech signal processing art. While "voice recognition" and "speech recognition" were both once used interchangeably to refer to spoken word recognition, nowadays these two terms are distinguished. The term "**voice** recognition" now denotes identification of **who** is doing the speaking (class 704/246), while "**speech** recognition" (or "**word** recognition") denotes identification of **what** is being said (class 704/251). So, appropriate correction to the proper terms of art is required.

### ***Claim Objections***

2. Claims 13 and 16 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 13 is exactly the same as claim 3. Claim 15 already claims a natural-language processor to understand the text string, which is the same as inferring its content, which is claimed, is claim 16.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 2, 15, 16, 18-21, and 26-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Sasai et al. (U.S. Pat. 6,510,412).

5. As per claim 1, Sasai teaches a handheld personal device comprising:  
a speech recognizer configured to transform an expression from a person into a different mode of information (converts text to speech, col. 4, lines 29-33);  
a natural-language processor configured to process the mode of information to extract, from a database, a piece of information that is personal to the person (concept extraction unit and intention interpretation unit process the text and the information management unit performs retrieval of data from private information storage unit, Fig. 3, elements 31-34); and  
the processor can still extract the piece of information when the person declares the expression differently (user may enter a sentence or a sequence of key words, col. 9, lines 46-51).

6. Regarding claim 2, Sasai teaches the processor analyzes the expression grammatically and semantically to transform at least part of the expression into at least one instruction (sentence structure analysis and semantic analysis, col. 4, lines 45-50).

7. Regarding claim 15, Sasai teaches a handheld assistant comprising:  
a speech-recognizer to transform an expression from a person into a text string (converts text to speech, col. 4, lines 29-33);

a natural-language processor configured to process the text string to understand the text string and initiate an appropriate action (concept extraction unit and intention interpretation unit process the text and the information management unit performs retrieval of data from private information storage unit, Fig. 3, elements 31-34); and  
wherein the appropriate action is dependent on a context associated with the expression (interpreting unit determines the context to be a schedule and a telephone number, col. 7, lines 39-46).

8. As per claim 16, rejected for the same reasons as claim 15.

9. As per claim 18, Sasai teaches the processor can extract, from a database, a piece of information that is personal to the person, and cause the piece of information to be presented to the person as the appropriate response (information management unit accesses the private information storage unit, col. 5, lines 16-22 and lines 31-34).

10. As per claim 19, Sasai teaches the processor can still extract the piece of information when the person declares the expression differently (user may enter a sentence or a sequence of key words, col. 9, lines 46-51).

11. As per claim 20, Sasai teaches a display to display the piece of information (Fig. 1, element 3-2).

12. As per claim 21, Sasai teaches the processor analyzes the expression grammatically and semantically to transform at least part of the expression into at least one instruction (sentence structure analysis and semantic analysis, col. 4, lines 45-50).

13. As per claim 26, Sasai teaches a method for obtaining information for a requestor interacting with a handheld device comprising:

receiving an input voice expression and converting the input voice expression into a text string (interfacing unit, col. 4, lines 28-33);

processing the text string using grammatical and semantic processing to determine a natural language meaning for the text string (sentence structure analysis, semantic analysis and intention extraction unit, col. 4, lines 45-50, lines 66-67 and col. 5, lines 1-15); and

performing an action based on the natural language meaning (retrieve information, col. 5, lines 16-22).

14. As per claim 27, Sasai teaches the performing to be retrieving information responsive to the natural language meaning of the text string (col. 5, lines 16-22).

15. As per claim 28, Sasai teaches presenting the retrieved information to the requestor (output the information to the interfacing unit, col. 5, lines 16-22).

16. As per claim 29, Sasai teaches:

determining a content associated with the input voice expression (intention extraction unit, col. 4, lines 66-67 and col. 5, lines 1-15); and

the performing operates to perform an action based on the natural language meaning and the context (interpreting unit determines the context to be a schedule and a telephone number and the meanings to be memorization of data, col. 7, lines 39-46).

17. Claims 24 and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Alpdemir (U.S. Pat. 6,658,389).

As per claim 24, Alpdemir teaches a handheld personal assistant comprising:  
a receiver configured to receive an expression from a person (cellular phones inherently have microphones, col. 3, lines 47-48);  
a transmitter configured to transmit the expression into a second system (cell phone connects to speech server, col. 3, lines 52-57);  
configured to transform the expression into a different mode of information (speech-to-text conversion, col. 4, lines 1-5);  
process the mode of information to extract, from a database, a piece of information that is personal to the person (retrieve information from database, col. 4, lines 5-7);  
transmit the information back to the handheld personal assistant (data played back to the user on the user's device, col. 4, lines 16-20); and  
the handheld personal assistant and the second system are connected wirelessly (wireless device, col. 3, lines 47-48).

18. Regarding claim 25, Alpdemir teaches the second system can still extract the piece of information when the person declares the expression differently (user says

"select" or another word to indicate the user's intention, col. 8, lines 64-67 and col. 9, line 1).

***Claim Rejections - 35 USC § 103***

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. Claims 3-14, 17, 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasai in view of Alpdemir.

Regarding claim 3, Sasai does not teach only allowing access to the information personal to the person based on the person's voice.

Alpdemir teaches a PDA that has natural language speech recognition capabilities that suggests using voice recognition to authenticate a user (col. 6, lines 14-20).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Sasai to authenticate a user for access to the user's personal information as taught by Alpdemir because it would make the user's information more secure hence making the user more likely to store the information on the device.

21. Regarding claim 4, Sasai teaches that the processor can still extract the piece of information even if the expression is ambiguous (presents plural pieces of information if conditions are not completely met, col. 10, lines 41-46).

Sasai does not teach that the recognizer has been previously trained to recognize the person's voice, but not another person's voice.

Alpdemir teaches a voice recognition system and this system would inherently have training in order to establish the characteristics of that user's voice (col. 6, lines 14-20).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Sasai to train the voice recognition system to recognize a particular user's voice as taught by Alpdemir because it would allow for the voice recognizer to have better success in recognizing a particular user's voice and making the system more secure.

22. Regarding claim 5, Sasai suggests the piece of information selected from a list consisting of a personal address book (information is name and phone number, col. 6, lines 30-34) and a to-do-list (list of entries on display, Fig. 1, element 3-2).

Sasai and Alpdemir do not teach the information to be a calendar.

However, the Examiner takes Official Notice that calendars are common in PDA's and it would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Sasai and Alpdemir for the information to be a calendar because it allows the user a simple way to keep track and monitor future appointments.

23. Regarding claim 6, Sasai teaches the expression can be one or more words (user input a sentence, col. 7, lines 6-8).

Sasai does not teach the piece of information depends on the context under which the person made the expression.

Alpdemir teaches the piece of information is dependent upon the context under which the person made the expression (the command “more” returns different information depending upon where in the interface the user is, col. 9, lines 54-56 and col. 10, lines 6-15).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Sasai to have the piece of information dependent upon the context under which the person made the expression as taught by Alpdemir because it would allow the same command to be used to access different information and so less commands have to be memorized by the user.

24. As per claim 7, Sasai teaches a display to display the piece of information (Fig. 1, element 3-2).

25. As per claim 8, Sasai teaches a voice synthesizer that transforms the piece of information into sound to communicate with the person (speech synthesis, col. 4, lines 4-9).

26. As per claim 9, Sasai teaches:

the piece of information was entered into the assistant by the user (user has assistant memorize information, col. 7, lines 38-45); and

a categorizer that stores the piece of information in the database (stores information with user intention index, col. 6, lines 24-29).

27. As per claim 10, Sasai teaches the piece of information to be entered through voice (input is speech prior to storage, Fig. 6, elements S61 and S65).

28. As per claim 11, Sasai teaches the person identifying a category to help the categorizer store the piece of information into the database (user can select the input intention, col. 11, lines 25-35).

29. As per claim 12, Sasai teaches that if the assistant cannot resolve an ambiguity in the expression, the personal assistant provides the person with a number of alternatives to resolve the ambiguity (presents plural pieces of information if conditions are not completely met, col. 10, lines 41-46).

30. As per claim 13, rejected for the same reasons as claim 3.

31. Regarding 14, Sasai teaches the expression can be one or more words (user input a sentence, col. 7, lines 6-8).

Sasai does not teach the piece of information depends on the context under which the person made the expression.

Aludemir teaches the piece of information is dependent upon the context under which the person made the expression (the command “more” returns different information depending upon where in the interface the user is, col. 9, lines 54-56 and col. 10, lines 6-15).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Sasai to have the piece of information dependent

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upon the context under which the person made the expression as taught by Alpdemir because it would allow the same command to be used to access different information and so less commands have to be memorized by the user.

32. Regarding claim 17, Sasai suggests the piece of information selected from a list consisting of a personal address book (information is name and phone number, col. 6, lines 30-34) and a to-do-list (list of entries on display, Fig. 1, element 3-2).

Sasai and Alpdemir do not teach the information to be a calendar.

However, the Examiner takes Official Notice that calendars are common in PDA's and it would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Sasai and Alpdemir for the information to be a calendar because it allows the user a simple way to keep track and monitor future appointments.

33. Regarding claim 22, Sasai does not teach only allowing access to the information personal to the person based on the person's voice.

Alpdemir teaches a PDA that has natural language speech recognition capabilities that suggests using voice recognition to authenticate a user (col. 6, lines 14-20).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Sasai to authenticate a user for access to the user's personal information as taught by Alpdemir because it would make the user's information more secure hence making the user more likely to store the information on the device.

34. Regarding claim 23, Sasai teaches that the processor can still extract the piece of information even if the expression is ambiguous (presents plural pieces of information if conditions are not completely met, col. 10, lines 41-46).

Sasai does not teach that the recognizer has been previously trained to recognize the person's voice, but not another person's voice.

Alpdemir teaches a voice recognition system and this system would inherently have training in order to establish the characteristics of that user's voice (col. 6, lines 14-20).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Sasai to train the voice recognition system to recognize a particular user's voice as taught by Alpdemir because it would allow for the voice recognizer to have better success in recognizing a particular user's voice and making the system more secure.

### ***Conclusion***

35. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yuschkik (U.S. Pat. 6,526,382), Coffman et al. (U.S. Pat. 6,377,913), Horiguchi et al. (U.S. Pat. 6,282,507), Halverson et al. (U.S. Pat. 6,757,718), and Bennett et al. (U.S. Pat. 6,665,640) teach natural language processing in handheld devices.

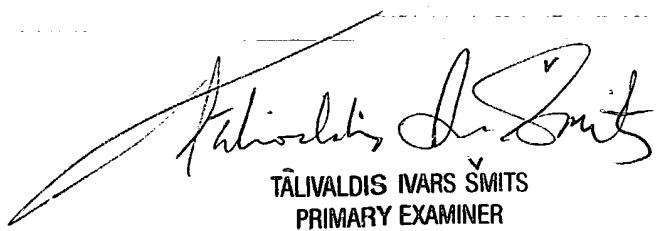
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J Sked whose telephone number is (703) 305-8663. The examiner can normally be reached on Mon-Fri (8:00 am - 4:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Talivaldis Smits can be reached on (703) 306-3011. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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